

SCHEDULE FOR SATURDAY, July 30, 2016

School participants arrive in Oak Ridge, TN and check in at the Comfort Inn. Transportation provided from airport and dinner hosted by Oak Ridge National Laboratory.

OAK RIDGE SCHOOL OPENING - SUNDAY, July 31, 2016

Spallation Neutron Source (SNS) Building 8600, Iran Thomas Auditorium, Room A103

Time/Date	Sunday, July 31, 2016	Time/Date	Sunday, July 31, 2016
9:30 - 11:30	-Badging -Safety Training (PFE)	1:00 - 1:45	Lecture Interaction of X-rays and Neutrons with Matter Roger Pynn University of Indiana
11:30 - 12:15	Lunch	1:45 - 2:00	Break
12:15 - 1:00	Welcomes  Opening remarks  Paul Langan Associate Laboratory Director Oak Ridge National Laboratory  Bryan Chakoumakos Group Leader Structure of Matter Quantum Condensed Matter Div. Oak Ridge National Laboratory  Brad O'Dell - SHUG	2:00 - 2:45	Lecture Continued Interaction of X-rays and Neutrons with Matter Roger Pynn University of Indiana
		2:45 - 3:00	Break
		3:00 - 6:30	Tours SNS, HFIR, and Graphite Reactor
		6:30 - 8:00	Dinner and Discussion

18<sup>th</sup> National School on Neutron and X-ray Scattering  
July 30- August 13, 2016

Program Week1 – August 1-6, 2016

Spallation Neutron Source (SNS) Building 8600, Iran Thomas Auditorium, Room A103

Time/Date	Monday August 1	Tuesday August 2	Wednesday August 3	Thursday August 4	Friday August 5	Saturday August 6
8:30 - 9:30	Lecture Continued Interaction of X-rays and Neutrons with Matter Roger Pynn University of Indiana	Lecture Single Crystal Diffraction Christine Beavers Advanced Light Source Lawrence Berkeley National Laboratory	Lecture Inelastic Neutron Scattering Bruce Gaulin McMaster University	Lecture Reflectivity Chuck Majkrzak National Institute of Standards and Technology	Lecture PDF Analysis Thomas Proffen Oak Ridge National Laboratory	Bus Travel to Argonne  Bus departs Comfort Inn - 8:00 AM
9:30 - 9:45	Break / Group Photo	Break	Break	Break	Break	
9:45 - 10:45	Lecture Continued Interaction of X-rays and Neutrons with Matter Roger Pynn University of Indiana	Lecture Powder Diffraction Cora Lind-Kovacs University of Toledo	Lecture continued Inelastic Neutron Scattering Bruce Gaulin McMaster University	Lecture Neutron Polarization Chuck Majkrzak National Institute of Standards and Technology	Lecture Imaging with Neutrons Indu Dhiman Oak Ridge National Laboratory	
10:45 - 11:00	Break	Break	Break	Break	Break	
11:00 - 12:00	Lecture Neutron Generation and Detection/ Neutron optics and Instrumentation Lee Robertson Oak Ridge National Laboratory	Lecture Quasi-elastic Neutron Scattering Ken Herwig Oak Ridge National Laboratory	Lecture Magnetic Scattering Bruce Gaulin McMaster University	Lecture SAXS/SANS Dale Schaefer University of Cincinnati	Lecture Timmy Ramirez-Cuesta Neutron Vibrational Spectroscopy Oak Ridge National Laboratory	
12:00 - 12:45	Lunch	Lunch	Lunch	Lunch	Lunch	
12:45 - 6:30	HFIR/SNS Experiment 1 (17 Instruments)  See Experiments Schedule	HFIR/SNS Experiment 2 (17 Instruments)  See Experiments Schedule	optional tour of Manufacturing Demonstration Facility (limit 30 students)	HFIR/SNS Experiment 3 (17 Instruments)  See Experiments Schedule	HFIR/SNS Experiment 4 (17 Instruments)  See Experiments Schedule	
6:30 - 8:00	Dinner and Discussion	Dinner and Discussion	Melton Hill Lake picnic	Dinner and Discussion	Dinner & social in the SNS lobby / Auditorium	Dinner at Argonne

SCHEDULE FOR SATURDAY & SUNDAY,  
August 6-7, 2016

School participants arrive at Argonne and register at the Argonne Guest House, Building 460.

Informal get-together Argonne Guest House Saturday @ ?. Food and beverages will be provided. All School participants and program presenters are invited to attend.

Sunday: free day (Optional trip to Chicago: buses depart Argonne Guest House for downtown Chicago at 10:00 am; Buses depart downtown Chicago for Argonne Guest House at 8:00 pm.)

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ARGONNE SCHOOL OPENING - Monday, August 8, 2016  
 Building 241, Room D172

Time/Date	Monday, August 8	Time/Date	Monday, August 8	Time/Date	Monday, August 8
8:30 AM	Opening remarks	8:45 - 9:45	Lecture X-ray Generation/Instrumentation Dennis M. Mills Argonne National Laboratory	2:15 - 2:30	Group Photo
	Prof. Peter Littlewood Director Argonne National Laboratory			2:30 - 3:30	Lecture Coherence Based Imaging David Vine ALS/Lawrence Berkeley National Lab
	Dr. Suzanne G.E. te Velthuis Physicist Materials Science Division Argonne National Laboratory	9:45 - 10:00	Break	3:30 - 3:45	Break
	Dr. Brian Toby Senior Physicist X-ray Science Division Advanced Photon Source Argonne National Laboratory	10:00 - 11:00	Lecture, Continued X-ray Generation/Instrumentation Dennis M. Mills Argonne National Laboratory	3:45 - 4:45	Lecture Writing Proposals for Neutron & X-ray Beamtime Suzanne te Velthuis (ANL)
		11:00 - 1:15	Break		
		11:15 - 12:00	X-ray Detection Antonio Miceli Argonne National Laboratory	4:45 - 6:00	Advanced Photon Source (APS) Tour
		12:00 - 1:00	Lunch	6:00 -	Dinner
		1:15 - 2:15	Lecture X-ray Imaging Chris Jacobsen Northwestern University/ Argonne National Lab		

18<sup>th</sup> National School on Neutron and X-ray Scattering  
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Program Week 2 – August 8-13, 2016  
 Building 241, Room D172

Time/Date	Tuesday August 9	Wednesday August 10	Thursday August 11	Friday August 12	Saturday August 13
8:30 - 9:30	Lecture TBD	Lecture X-ray Abs. Spectroscopy I Grant Bunker Illinois Institute of Technology	Lecture Time Resolved Scattering Paul Evans	Lecture Polycrystalline Diffraction Matt Miller Cornell/CHESS	Student Presentations
9:30 - 9:45	Break	Break	Break	Break	
9:45 - 10:45	Lecture XPCS Andrei Fluerasu Brookhaven (NSLS-II)	Lecture X-ray Abs. Spectroscopy II Grant Bunker Illinois Institute of Technology	Lecture Surface Scattering Paul Zshack (NSLS-II)	Lecture Materials Engineering Don Brown Los Alamos National Laboratory	
10:45 - 11:00	Break	Break	Break	Break	School participants depart for Home
11:00 - 12:00	Lecture X-ray Magnetic Dichroism Elke Arenholz Lawrence Berkeley National Laboratory	Lecture Applications of XAS in Life Sciences Ingrid Pickering Univ. Saskatchewan	Lecture Inelastic X-ray Scattering Ercan Alp	Lecture Diffuse Scattering Ray Osborn Argonne National Laboratory	
12:00 - 1:15	Lunch	Lunch	Lunch	Lunch	
1:30 - 6:00	X-ray Experiment 1 (15 Instruments)  See Experiments Schedule	X-ray Experiment 2 (16 Instruments)  See Experiments Schedule	X-ray Experiment 3 (12 Instruments)  See Experiments Schedule	X-ray Experiment 4 (11 Instruments)  See Experiments Schedule	
6:00 - 7:00	Dinner	Dinner	Dinner	Final Dinner	